

C2 47. The FET of claim 46, further comprising:
a third implant disposed in said substrate and aligned to said spacers.

Remarks

The present amendment is proffered in response to the pending Office Action of July 11, 2002, in which claims 6-8 stand rejected. Applicants note with appreciation the allowance of their claims 10 and 12-21.

By this Amendment, the title has been amended to more clearly refer to the T-shaped gate; the rejected claims 6-8 have been cancelled; claim 20 has been amended to incorporate notions from cancelled claim 7; and new claims 44-47 have been added. The amendment is further set forth in blackline form in Exhibit A, VERSION WITH MARKINGS TO SHOW CHANGES MADE." A supplemental Information Disclosure Statement is filed contemporaneously with this Amendment, citing references that were cited in a PCT Search Report for a counterpart to the present Application.

The new independent claim 44 (and the claims 45-47 dependent thereon) is directed to the invention as shown in Fig. 3e and as discussed at the first full paragraph of page 9. Specifically, the gate is recited in conjunction with a spacer that is disposed on the sidewalls of the upper portion of the gate, and extends down to the substrate without contacting the sidewalls of the lower portion of the gate, to define an air gap therebetween. This arrangement is not shown in any of the prior art of record (for example, the spacers 262 shown in Fig. 12 of U.S. 6,306,710 B1 newly cited by the Examiner contact both the wider and narrower portions of the gate 230; there are no spacers taught in U.S. 6,284,613, previously cited by the Examiner). As discussed in the specification, the "air gap spacer" resulting from the invention reduces the effective dielectric constant of the spacers, to reduce overlap capacitance. Accordingly, Applicants respectfully submit that this claim (along with claims 50-52 dependent thereon) recites patentable subject

BUR920000029US1

-3-

S.N. 09/713,830

matter over the prior art.

Accordingly, Applicants respectfully request entry of the present Amendment and passage of their subject application to issuance in view thereof. Should the Examiner have any comments, questions, or suggestions, please do not hesitate to contact the undersigned attorney at the telephone number and/or email address set forth below.

Respectfully submitted,

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OCT 09 2002

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-4-

S.N. 09/713,830

Exhibit A**VERSION WITH MARKINGS TO SHOW CHANGES MADE****In the Title:**

Please amend the title to read "FET With [Notched] T-Shaped Gate"

In the claims:

Cancel Claims 6-8, without prejudice.

20. (Amended) An FET, comprising a gate, said gate comprising first conductive material and a second conductive material different from said first conductive material, said second conductive material on said first conductive material, wherein said second conductive material extends beyond said first conductive material to provide a T-shaped gate, wherein said first material has a dimension less than a photolithographic minimum dimension, a first diffusion self-aligned to the first conductive material, a second implant defined by said second conductive material, and a spacer along sidewalls of said second conductive material, wherein a third implant is defined by said spacer.

Add the following new claims:

44. An FET, comprising
a gate disposed on a substrate, said gate comprising a lower portion having first sidewalls and an upper portion having second sidewalls; and
spacers disposed on said second sidewalls and extending down to said substrate without contacting said first sidewalls to define an air gap therebetween.

45. The FET of claim 44, wherein said lower portion of said gate extends beyond said lower portion to provide a T-shaped gate.

46. The FET of claim 45, further comprising:
a first implant disposed in said substrate and aligned to said first sidewalls; and

BUR920000029US1

-5-

S.N. 09/713,830

a second implant disposed in said substrate and aligned to said second sidewalls.

47. The FET of claim 46, further comprising:

a third implant disposed in said substrate and aligned to said spacers.

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-6-

S.N. 09/713,830